



REPLACEMENT  
AS A RESULT OF  
REVERSE  
TRANSCRIPTION  
OF VECTOR RNA

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IRRELEVANT SEQUENCE  
REPLACEMENT  
MUTATION OF  
ENHANCER AND  
PROMOTER

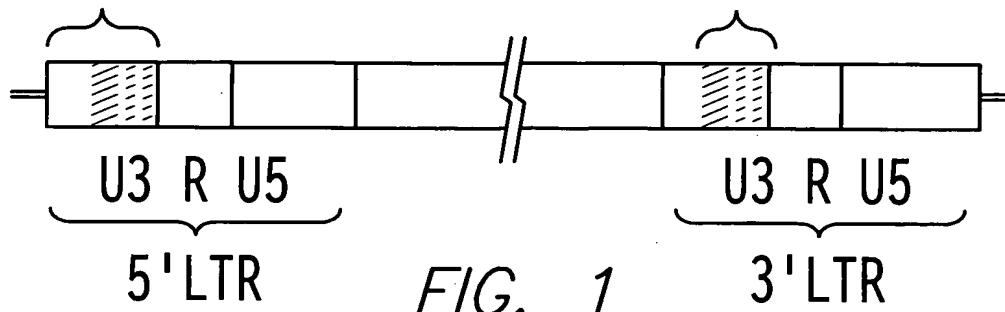


FIG. 1

REPLACEMENT  
AS A RESULT OF  
REVERSE  
TRANSCRIPTION  
OF VECTOR RNA

IRRELEVANT  
SEQUENCE  
REPLACEMENT  
MUTATION OF  
ENHANCER  
H2A614 STEM LOOP  
REPLACEMENT  
MUTATION OF  
PROMOTER

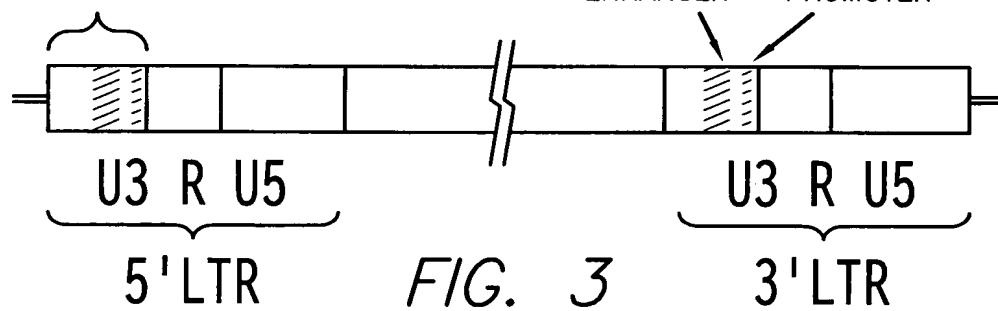


FIG. 3

REPLACEMENT  
AS A RESULT OF  
REVERSE  
TRANSCRIPTION  
OF VECTOR RNA

REPLACEMENT MUTATION  
OF PROMOTER/ENHANCER  
SEQUENCES WITH A  
POLYADENYLATION  
PROCESSING SIGNAL  
WITHOUT AATAAA

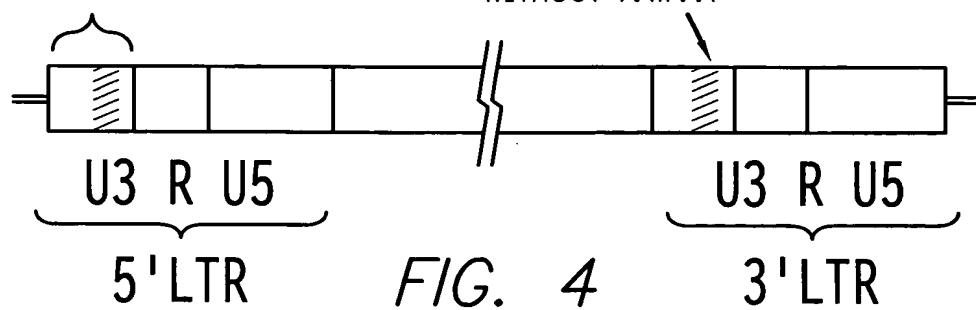


FIG. 4



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Wild type 3' LTR sequence:

1	GAACAGATGG	AACAGCTGAA	TATGGGCCAA	ACAGGATATC	TGTGG TAAGC
51	AGTTCC TGCC	CCGGCTCAGG	GCCAAGAACAA	GATGGAACAG	CTGAATATGG
101	GCCAAACAGG	ATATCTGTGG	TAAGCAGTTC	CTGCCCCGGC	TCAGGGCCAA
151	GAACAGATGG	TCCCCAGATG	CGGTCCAGCC	CTCAGCAGTT	TCTAGAGAAC
201	CATCAGATGT	TTCCAGGGTG	CCCCAAGGAC	CTGAAATGAC	CCTGTGCCTT
251	ATTTGAACTA	ACCAATCACT	TCGCTTCTCG	CTTCTGTTCG	CGCGCTTCTG
301	CTCCCCGAGC	TCAATAAAA			

Corresponding modified 3' LTR sequence from pENZ1  
(modified sequences in bold italics):

1	<b>ACGCTTGATC</b>	<b>CGGCTACCTG</b>	<b>CCCATTGAC</b>	<b>CACCAAGCGA</b>	<b>AACATCGCAT</b>
51	<b>CGAGCGAGCA</b>	<b>CGTACTCGGA</b>	<b>TGGAAGCCGG</b>	<b>TCTTGTGAT</b>	<b>CAGGATGATC</b>
101	<b>TGGACGAAGA</b>	<b>GCATCAGGGG</b>	<b>CTCGCGCCAG</b>	<b>CCGAACTGTT</b>	<b>CGCCAGGCTC</b>
151	<b>AAGGCGCGCA</b>	<b>TGCCCCGACGG</b>	<b>CGAGGGATCTC</b>	<b>GTCGTGACTT</b>	<b>TCTAGAGAAC</b>
201	CATCAGATGT	TTCCAGGGTG	CCCCAAGGAC	CTGAAATGAC	CCTGTGCCTT
251	ATTTGAACTA	ACCGGTCACT	TCGCTTCTCG	CTTCTGTTCG	CGCGCTTCTG
301	CTCCCCGAGC	<b>TCAGCTGCG</b>			

FIG. 2

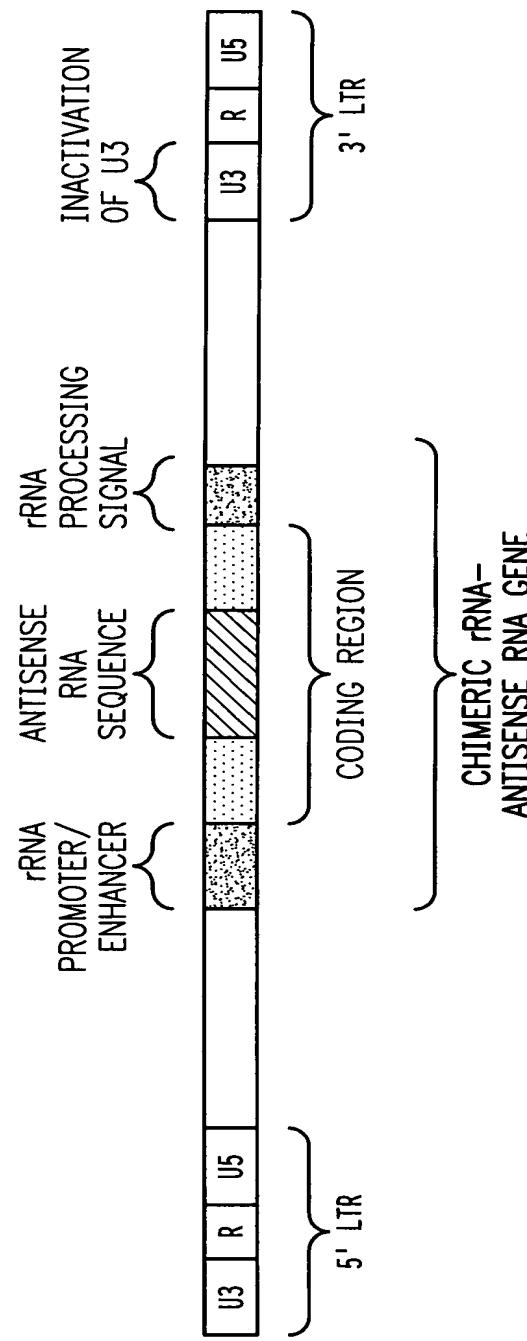


FIG. 5



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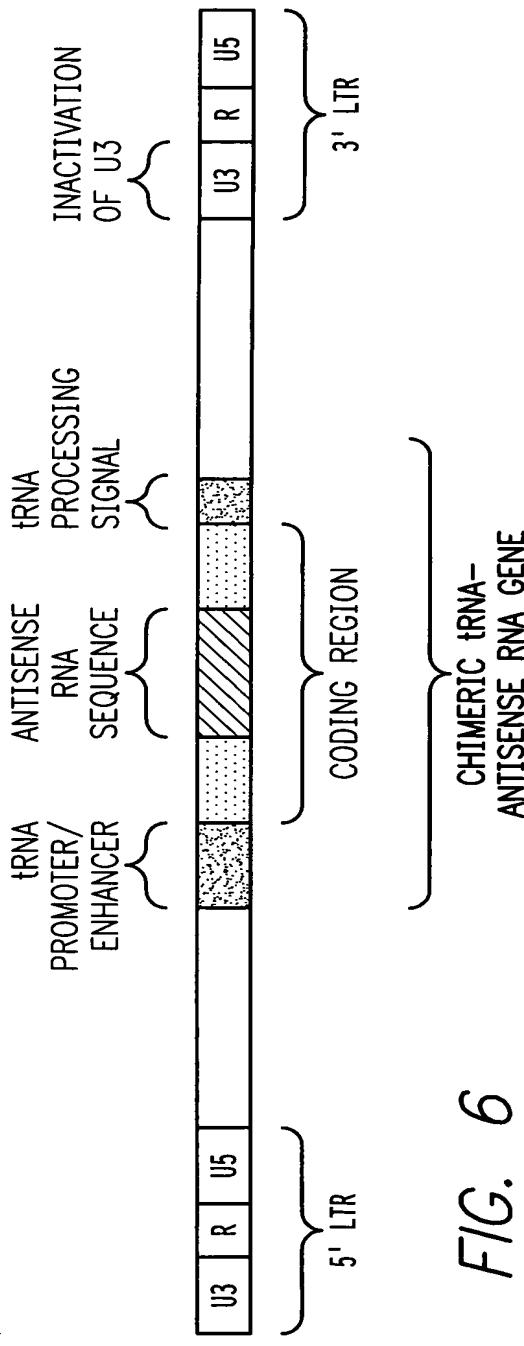


FIG. 6

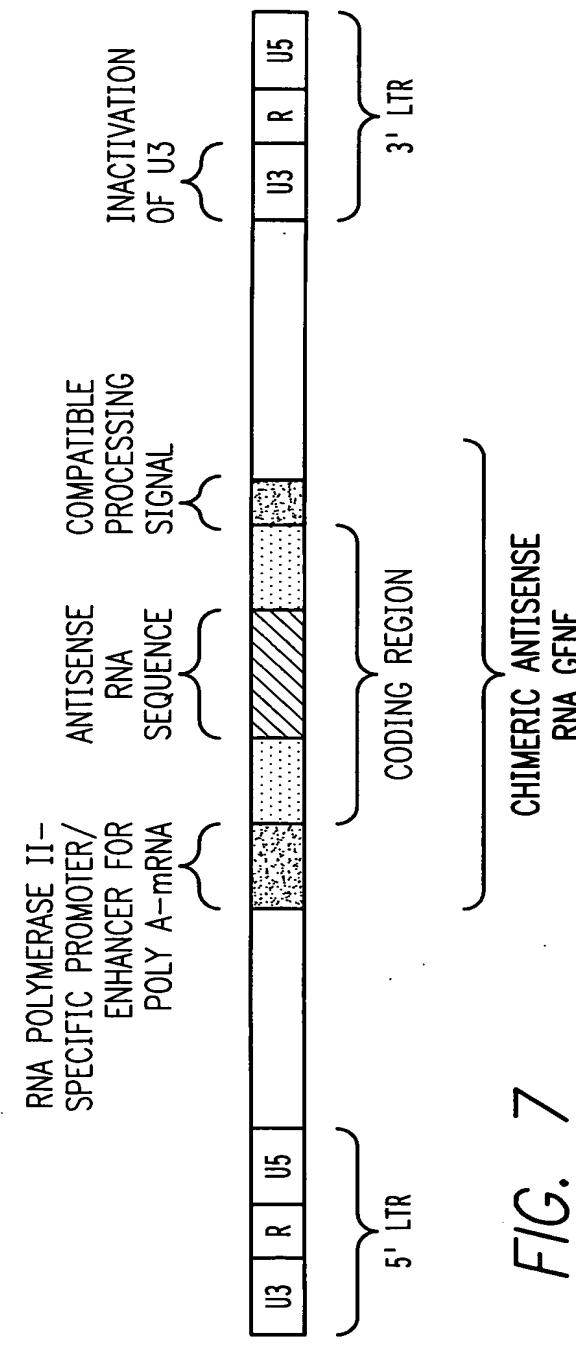


FIG. 7



Vector DNA Construct  
Transfected into  
Packaging Cell

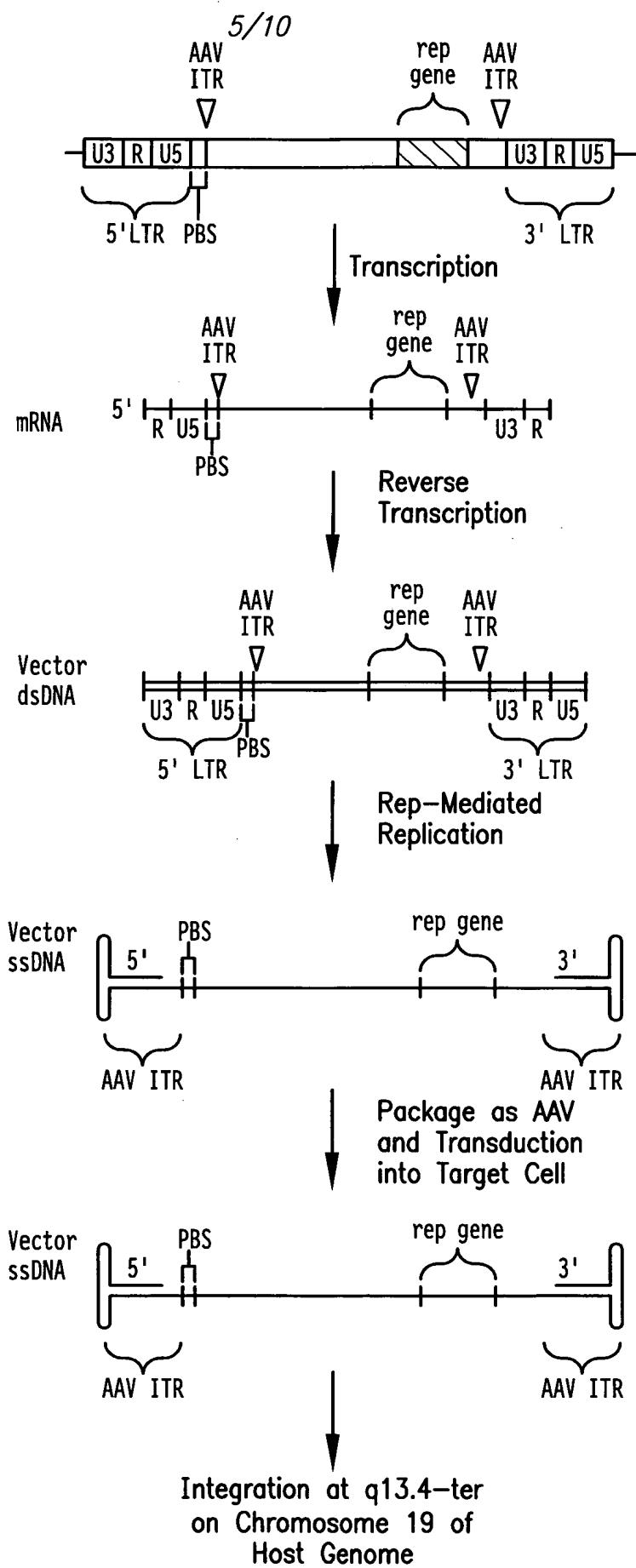


FIG. 8



Vector DNA Construct  
Transfected into  
Packaging Cell

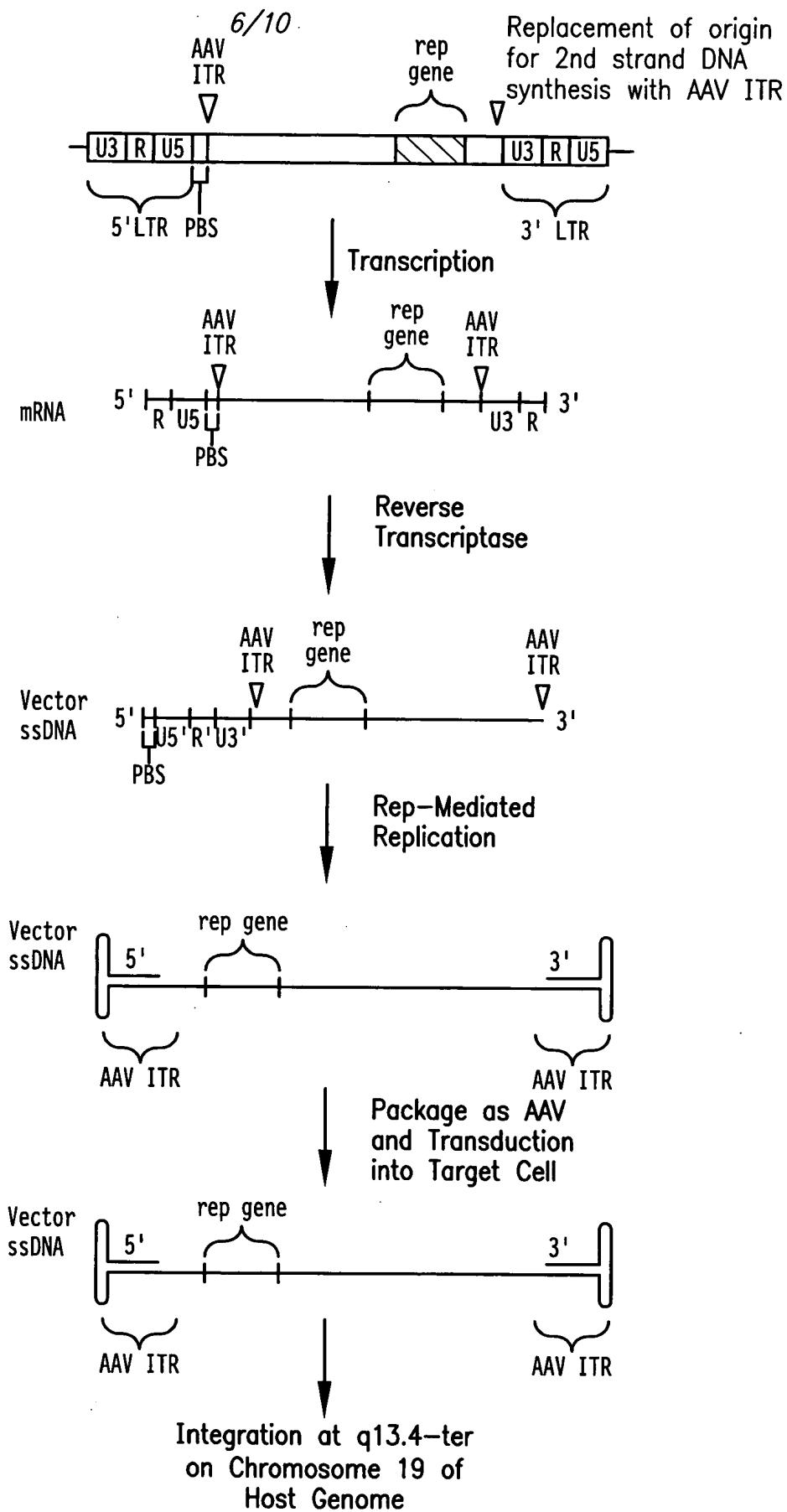


FIG. 9



Vector DNA Construct  
Transfected into  
Packaging Cell

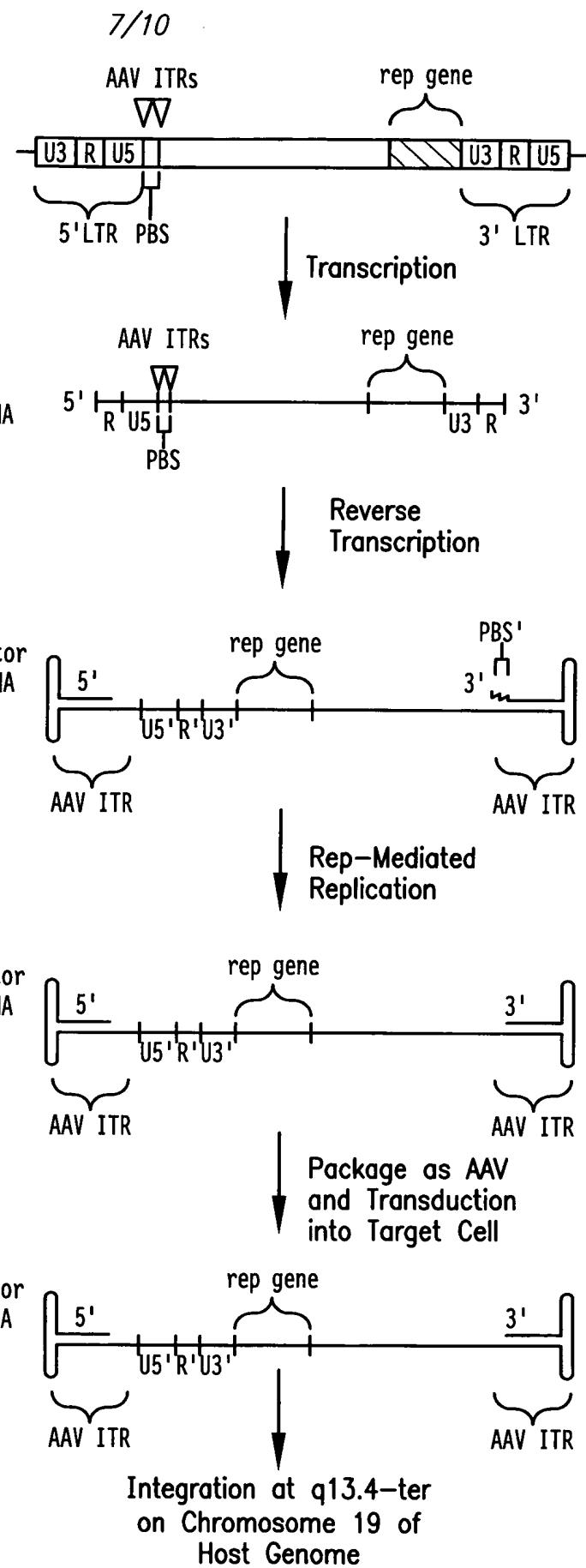


FIG. 10



Vector DNA Construct  
Transfected into  
Packaging Cell

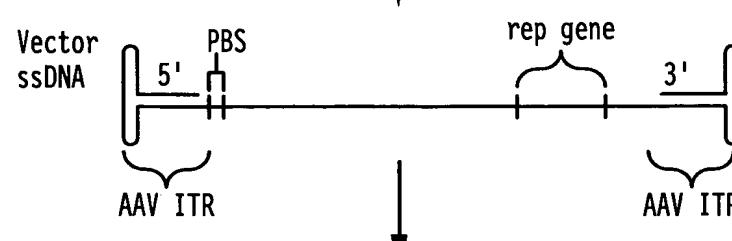
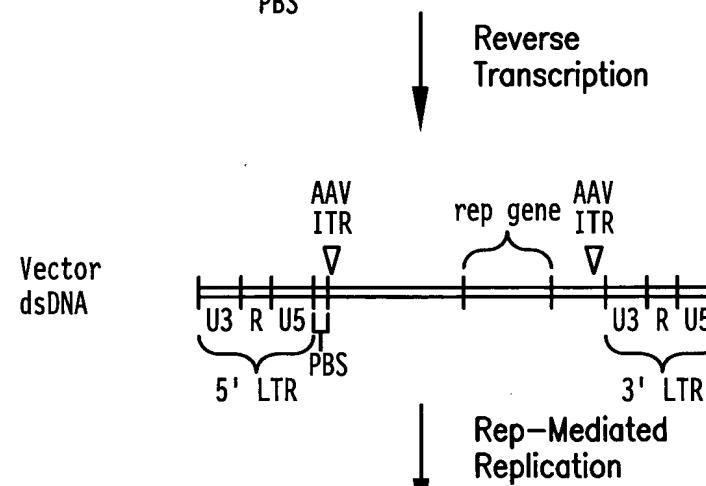
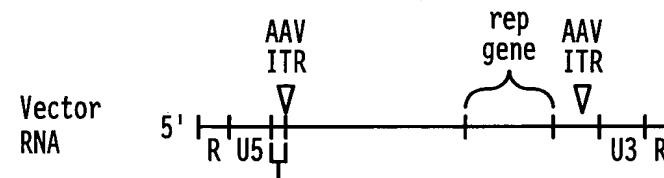
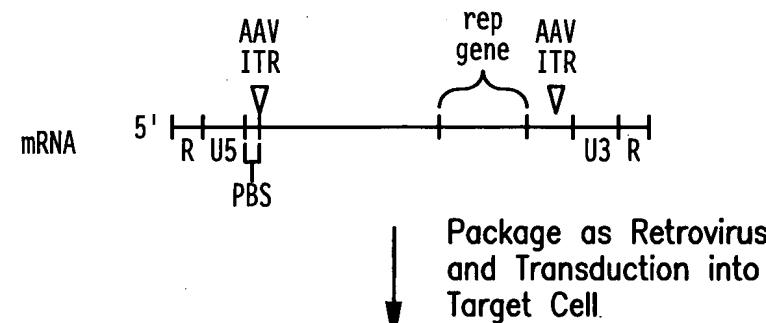
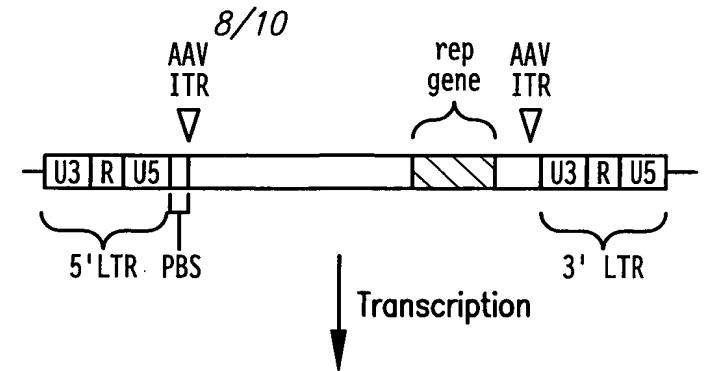


FIG. 11



Vector DNA Construct  
Transfected into  
Packaging Cell

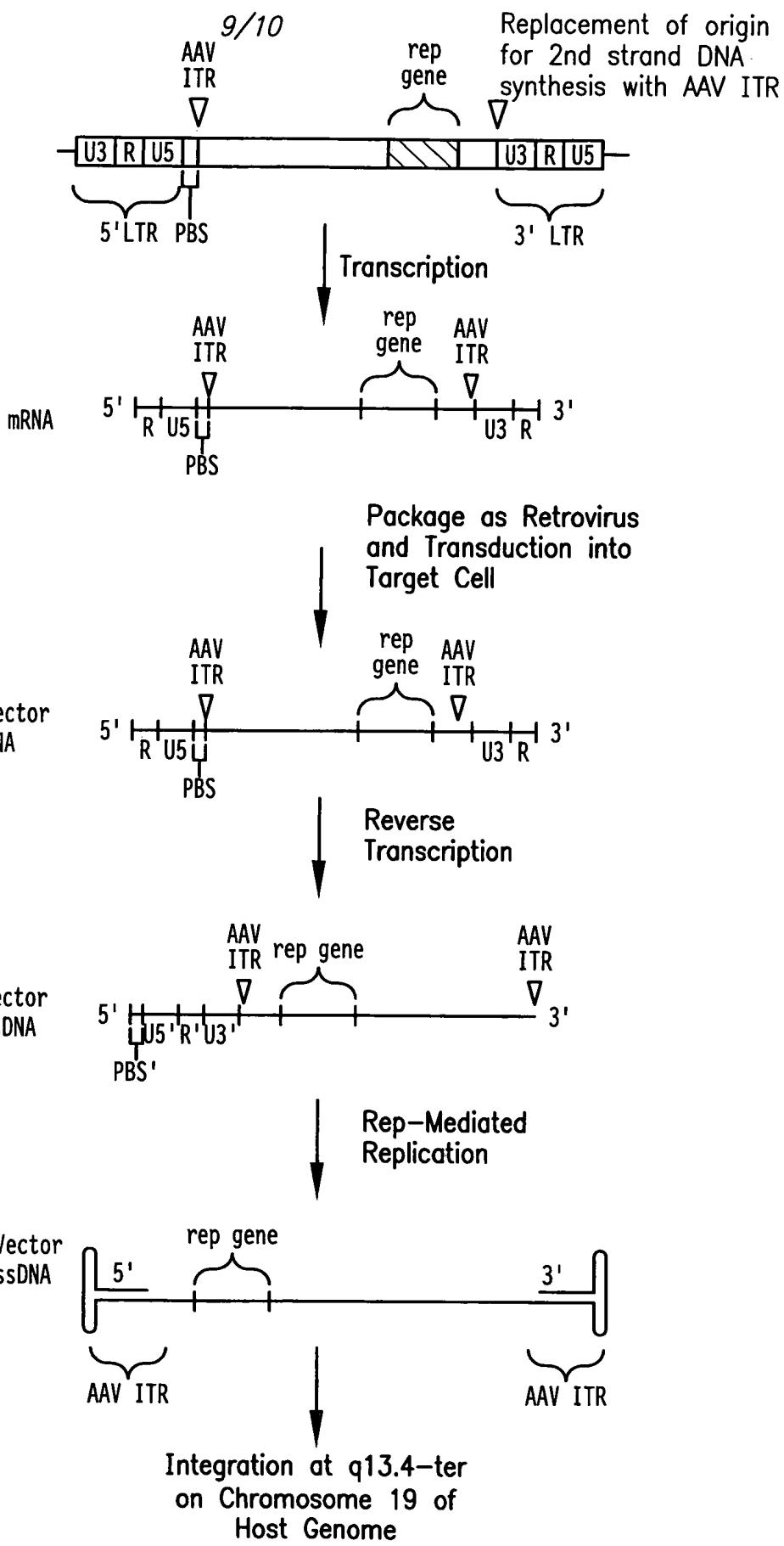


FIG. 12



Vector DNA Construct  
Transfected into  
Packaging Cell

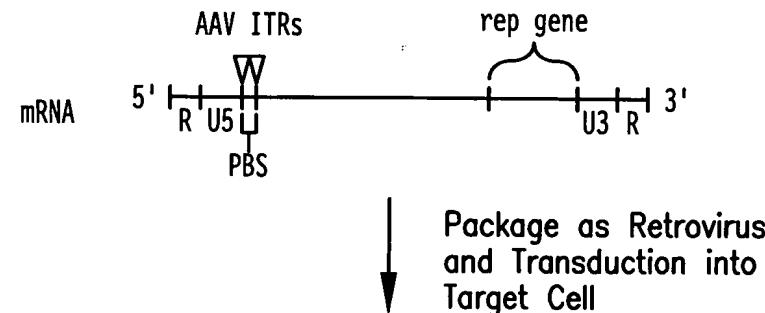
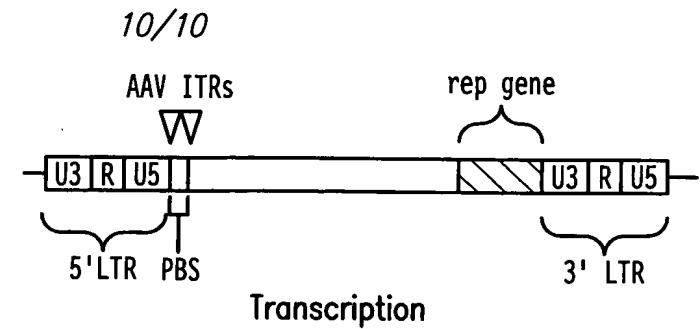
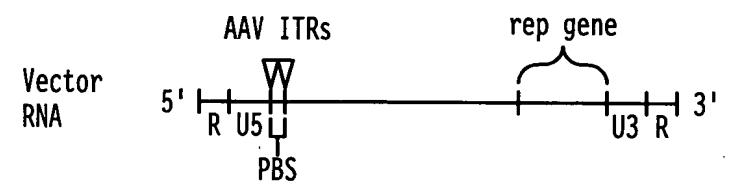
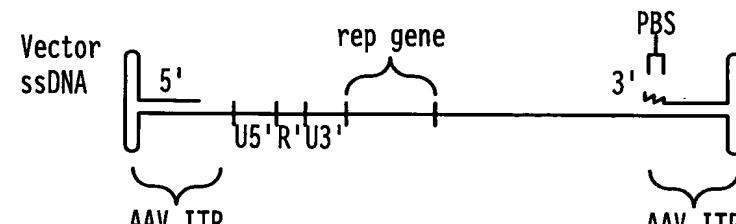


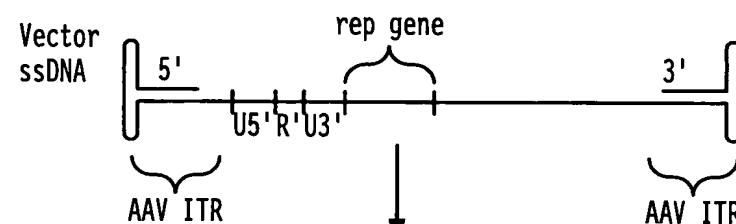
FIG. 13



↓  
Reverse  
Transcription



↓  
Rep-Mediated  
Replication



↓  
Integration at q13.4-ter  
on Chromosome 19 of  
Host Genome